IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 09/923,221
Filed: August 6, 2001
Inventor:
Yongdong Zhao
Craig A. Lindahl

Title: Timer Rollover Handling Mechanism for Traffic Policing

Examiner: Martin, Nicholas A.
Group/Art Unit: 2154
Atty. Dkt. No: 5694-00200

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Robert C. Kowert
Name of Registered Representative

Signature

August 26, 2005
Date

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. The review is requested for the reason(s) stated below.

Claims 1-32 remain pending in the application. Reconsideration of the present case is earnestly requested in light of the following remarks. Please note that for brevity, only the primary arguments directed to the independent claims are presented, and that additional arguments, e.g., directed to the subject matter of the dependent claims, will be presented if and when the case proceeds to Appeal.

Claims 1, 16, 17 and 32 are rejected under 35 U.S.C. § 102(e) as being anticipated by Welin (U.S. Publication 2002/0031086). Claims 2-4, 6-15 and 18-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Welin in view of Fahmi et al. (U.S. Patent 5,668,797) (hereinafter "Fahmi"). Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Welin and Fahmi in further view of the "Official Notice". Applicants note the following clear errors in the Examiner's rejection.

Applicants submit that the Examiner has failed to provide a *prima facie* rejection of claims 1, 16, 17, and 32.

Regarding claim 1, Welin clearly fails to disclose a memory coupled to a cell processing unit and configured to store one or more policy parameters and rollover data for each of the communication channels, wherein the rollover data comprises an indication of a rollover relationship between the timer value and one of the policing parameters for each of the communication channels. Instead, Welin teaches a method for sorting a queue of telephony packets by a deadline value for each packet by which that packet must be serviced or lost. The packets are then decoded in the resultant sort order (Welin, Abstract, paragraphs 0015, 0058 and 0080). The Examiner cites several portions of Welin that describe how packets are received, the type of hardware Welin's system can be implemented on, and that describe how Welin determines the deadline value for each packet, taking into account clock counter rollover. However, **none of the cited portions (nor any other portion of Welin) discloses a memory configured to store rollover data *for each of the communication channels*.**

Moreover, Welin does not store, or even calculate, rollover data for each communication channel, wherein the rollover data includes an indication of a rollover relationship between the timer value and one of the policing parameters for each communication channel. Instead, Welin calculates a deadline value for each packet corresponding to a time by which the packet must be serviced (Welin, paragraphs 0139, 0146, 0189). Welin does not disclose anything about storing rollover data for each communication channel. Instead, Welin calculates the deadline value for each received packet and sorts a queue of received packets according to the calculated deadline value for each packet. Thus, the packets in Welin's system can then be serviced from the queue in deadline order, thereby helping to ensure that packets with sooner deadlines are serviced before packets with later deadlines.

In response to the above arguments, the Examiner, in the Response to Arguments section of the Final Action, cites various paragraphs of Welin describing various components and features of Welin's system. However, as noted above and previously, none of the Examiner's cited passages actually describes storing rollover data for each of the communication channels, *wherein the rollover data includes an indication of a rollover relationship between the time value and one of the policing parameters for each of the communication channels*. For a detailed discussion regarding the Examiner's Response to Arguments, please refer to Applicants Response to Final Office Action, filed July 19, 2005. Additionally, Applicants note that the Examiner's comments in the Advisory Action of August, 10, 2005, are merely an exact copy of the Examiner's Response to Arguments in the Final Office Action of May 26, 2005 and do not provide any additional arguments or rebuttal to Applicants' arguments. In short, in attempting to show that Welin teaches *rollover data includes an indication of a rollover relationship between the time value and one of the policing parameters for each of the communication channels*, the Examiner has merely cited paragraphs from Welin that mention either deadlines or describe how rollover timers work in general. **The Examiner has failed to cite any portion of Welin that describes or even mentions indications of rollover relationships between a time value policing parameters for each communication channel.**

The Examiner seems to be arguing that by describing any use of a system that includes timers which rollover, Welin is also somehow disclosing the specific limitation of claim 1 of a memory configured to store one or more policing parameters and rollover data for each of the communication channels. However, as shown above, none of the cited passages of Welin makes any mention of such policing parameters or of rollover data for each of the communication channels. Moreover, none of the cited passages makes any mention of rollover data including an indication of a rollover relationship between the timer value and a policing parameter for each of the communication channels. Merely describing how circular timers work and how one must be aware of rollover in general does not in any way disclose, teach, or even suggest the specific

limitations of claim 1 regarding rollover data for each of the communication channels, wherein the rollover data includes an indication of a rollover relationship between the time value and one of the policing parameters for each of the communication channels.

Additionally, Welin also clearly fails to disclose that for each received incoming data cell, the cell processing unit is configured to assign an arrival time from the timer value and compare the received incoming data cell's arrival time to the one or more policing parameters for the received incoming data cell's communication channel to determine if the received incoming data cell is conforming or non-conforming to a rate for the communication channel, as recited in claim 1. The Examiner cites various passages of Welin that describe how a packet's deadline value is calculated, including accounting for clock rollover. However, Welin does not teach comparing a packet's arrival time to policing parameters for the packet's communication channel to determine if the packet is conforming or non-conforming to a rate for the communication channel. Instead, as noted above, Welin calculates a deadline value for each received packet and uses those deadline values to sort and service the packets in order by their respective deadline values (Welin, paragraphs 0139, 0146, 0189 and 0551-0556).

In response to this argument, the Examiner again cites many of the same paragraphs cited in the rejection of claim 1, but also cites paragraph [0154] describing a "FIFO" memory model of buffering in which "all data is always shifted toward the output" and "[e]ach time a data element is withdrawn from the memory, all remaining data is shifted forward". **These portions of Welin have no relevance whatsoever to the above-noted limitations of claim 1.** Welin's description of how FIFO buffers work has absolutely no relevance to comparing a packet's arrival time to policing parameters for the packet's communication channel to determine if the packet is conforming or non-conforming to a rate for the communication channel. Once again the Examiner fails to provide any explanation or interpretation, but merely cites various and irrelevant portions of Welin. For a detailed discussion of the portions of Welin cited by the Examiner in the Response to Arguments section of the Final office action and perfunctorily repeated in the Advisory Action, please refer to Applicants' arguments in the Response to Final Office Action, filed July 19, 2005. In summary, the Examiner is arguing that by disclosing general qualities regarding time and packet flow, Welin somehow also discloses comparing a packet's arrival time to policing parameters for the packet's communication channel to determine if the packet is conforming or non-conforming to a rate for the communication channel. The Examiner fails to point out or cite any portion of Welin that actually describes or mentions the specific limitations of claim 1 regarding comparing a packet's arrival time to policing parameters for the packet's communication channel.

Furthermore, Welin does not disclose that the cell processing unit is configured to access the rollover data for the received incoming data cell's communication channel to account for the rollover relationship when comparing the arrival time to the one or more policing parameters, as recited in claim 1. Nowhere, either in the Examiner's cited passages or elsewhere, does Welin mention accessing *rollover data* for a received packet's communication channel. Welin does not calculate or maintain rollover data for communication channels. Instead, Welin maintains time-stamp values of deadlines for each non-serviced packet (Welin, paragraphs 0080, 0139, 0146, 0189).

In response to this argument, the Examiner, in the Final Action and the Advisory Action, cites many of the same paragraphs described above, but also cites paragraphs [0080] and [0140]. Paragraph [0080] describes how Welin's link list queue "tells the system which packets to decode first, in order of their deadline number" and further describes how Welin's system "access the cell at the top of the queue 1431, and thereupon detects what process to use and for what channel and

triggers decode of the frame in the corresponding packet." The portions of Welin cited by the Examiner have no relevance to the above-noted limitations of claim 1. Welin's description of accessing and decoding packets in order of their deadlines from a linked list queue **has absolutely no relevance** to accessing rollover data for a received data cell's communication channel to account for the rollover relationship when comparing the cell's arrival time to policing policies. For example, the Examiner has cited a paragraph describing how Welin determines how much data in a buffer remains to be sent out, which clearly has nothing to do with accessing rollover data for a data cell's communication channel. Thus, the Examiner clearly fails to cite or point out any portion of Welin disclosing, teaching, or suggesting the specific limitations of claim 1 regarding a cell processing unit that is configured to access the rollover data for the received incoming data cell's communication channel to account for the rollover relationship when comparing the arrival time to the one or more policing parameters.

Thus, the Examiner has clearly failed to demonstrate that Welin discloses each and every element of the claimed invention, arranged as in the claim, which is required for a prima facie rejection under 35 U.S.C. § 102. As shown above and in Applicants' previous responses, claim 1 is clearly not anticipated by the cited art and removal of the section 102(e) rejection is respectfully requested. Remarks similar to those regarding claim 1 also apply to claim 17.

Regarding claim 16, Welin fails to disclose a network device configured as an Asynchronous Transfer Mode (ATM) switch for the plurality of communication channels, wherein each communication channel is an ATM virtual channel. The Examiner cites paragraph [0313] where Welin describes an embodiment of his invention that includes asynchronous channels, **but does not mention a network device configured as an ATM switch**. Merely describing asynchronous decoding of channel packets is not the same as actually disclosing a network device configured as an ATM switch. If fact, **nowhere does Welin describe anything that can be considered to be configured as an ATM switch**. Furthermore, Welin does not describe, either at the Examiner's cited passage or elsewhere, communication channels that are ATM virtual channels. Thus, Welin clearly fails to anticipate a network device configured as an Asynchronous Transfer Mode (ATM) switch for the plurality of communication channels, wherein each communication channel is an ATM virtual channel.

Therefore, the rejection of claim 16 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks also apply to claim 32.

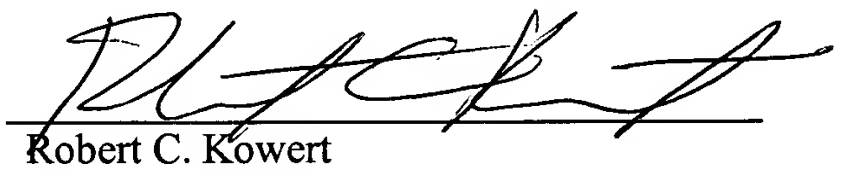
The Examiner's rejection of many of the dependent claims is additionally erroneous. For example, the cited art is clearly insufficient to support the rejection of claims 2-15 and 18-31, as discussed in detail in Applicants' previous response on pp. 8-15.

In light of the foregoing remarks, Applicant submits the application is in condition for allowance, and notice to that effect is respectfully requested. If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above referenced application from becoming abandoned, Applicants hereby petition for such an extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 501505/5694-00200/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard
☒ Notice of Appeal

Respectfully submitted,



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